In the claims:

Please amend the claims as indicated below. The language being added is underlined ("___") and the language being deleted contains strikethrough ("—").

1. (Canceled)

2. (Currently Amended) A multiple digital subscriber line (DSL) communication system, comprising:

a customer interface configured to supply an upstream data transmission and receive a downstream data transmission; and

a plurality of DSL transceivers in communication with the customer interface via a first data transmission link, the plurality of DSL transceivers in communication with a respective DSL transceiver at a central office via respective transmission lines, wherein each of the plurality of DSL transceivers is configured to receive a downstream data stream and to transmit an upstream data stream, the upstream data transmission configured for distribution across the plurality of DSL transceivers, the plurality of DSL transceivers further configured to generate the downstream data transmission from the plurality of downstream data streams, the plurality of DSL transceivers in communication with each other via a plurality of DSL transceiver data transmission links,

wherein each of the plurality of DSL transceivers is in communication with a first data interface and a second data interface, the first data interface interposed between an associated DSL transceiver and a DSL transmission link with a next closest DSL transceiver to the customer interface and configured to receive an upstream data stream from the next closest DSL transceiver to the customer interface, the second data interface interposed between an associated DSL transceiver and a DSL transmission link with a next furthest DSL transceiver to the customer interface and configured to receive a downstream data stream from the next furthest DSL transceiver from the customer interface.

3. (Previously Presented) The multiple DSL communication system of claim 2, wherein the plurality of DSL transceivers is configured to generate the upstream data transmission from the plurality of upstream data streams.

4. (Previously Presented) The multiple DSL communications system of claim 2, wherein the first and second data interfaces associated with each of the plurality of DSL transceivers comprise serial data interfaces.

5. (Previously Presented) The multiple DSL communications system of claim 2, wherein the first and second data interfaces associated with each of the plurality of DSL transceivers comprise bi-directional data interfaces.

6. (Previously Presented) The multiple DSL communications system of claim 2, wherein the first and second data interfaces associated with each of the plurality of DSL transceivers comprise independent data interfaces.

7. (Previously Presented) The multiple DSL communications system of claim 6, wherein the first and second data interfaces between a first DSL transceiver closest to the customer interface and a second DSL transceiver next closest to the customer interface respectively operate at an upstream data rate set by the first DSL transceiver, and wherein additional next closest DSL transceiver pairs from the customer interface operate at an upstream data rate set by the DSL transceiver closest to the customer interface, respectively.

8. (Previously Presented) The multiple DSL communication system of claim 6, wherein the first and second data interfaces between a last DSL transceiver furthest from the customer interface and a next closest DSL transceiver closer to the customer interface operate at a downstream data rate set by the last DSL transceiver and wherein subsequently closer DSL transceiver pairs to the customer interface operate at a downstream data rate set by the DSL transceiver furthest from the customer interface, respectively.

9. (Previously Presented) The multiple DSL communication system of claim 6, wherein upstream and downstream DSL transceiver to DSL transceiver data transmissions are performed via a pulse coded modulation (PCM) data transfer protocol.

10. (Previously Presented) The multiple DSL communication system of claim 6, wherein upstream and downstream DSL transceiver to DSL transceiver data transmissions are performed via an asynchronous transfer mode (ATM) data transfer protocol.

11. (Previously Presented) The multiple DSL communication system of claim 10, further comprising:

an ATM cell synchronization signal operative in parallel and co-directional with each of the plurality of DSL transceiver data transmission links.

12. (Previously Presented) The multiple DSL communication system of claim 11, wherein the ATM cell synchronization signal is configured to identify an ATM cell header.

13. (Currently Amended) A multiple digital subscriber line (DSL) communication system, comprising:

means for communicating with customer premises equipment to receive an upstream data transmission;

means for distributing a portion of the received upstream data transmission to each of a plurality of DSL communication links for transmission via a plurality of serially connected DSL transceivers in communication with each other;

means for receiving a portion of a downstream data transmission distributed across each of the plurality of DSL communication links;

means for combining the portions of the downstream data transmission such that the downstream data transmission is reconstructed via the plurality of serially connected DSL transceivers in communication with each other;

means for configuring the rate of the upstream and downstream data transmission being driven by the last DSL transceiver that is farthest from a customer interface, with the rate of the upstream and downstream data transmission between two previous DSL transceivers being derived from the rate of the upstream and downstream data transmission of the subsequent DSL transceiver; and

means for communicating the reconstructed downstream data transmission to the customer premises equipment.

14. (Previously Presented) The multiple DSL communication system of claim 13, wherein the means for receiving a portion of a downstream data transmission is accomplished via a plurality of DSL transceivers dedicated to receive the portion of a downstream data transmission from a predetermined remote DSL transceiver.

15. (Canceled)

16. (Canceled)

17. (Previously Presented) The multiple DSL communication system of claim 13, wherein the plurality of DSL transceivers are in further communication with a first data

interface and second data interface interposed in a communication link between serially connected DSL transceivers.

18. (Previously Presented) The multiple DSL communication system of claim 13, wherein the plurality of DSL transceivers are in further communication with a first data interface and second data interface interposed in a communication link between serially connected DSL transceivers.

19. (Previously Presented) A method for transferring data between multiple DSL transceivers at a customer premise, comprising:

recovering a mapped portion of a downstream data stream at each of the multiple DSL transceivers; using a first data interface coupled to each respective DSL transceiver to communicate the recovered portion of the downstream data stream to the next closest DSL transceiver to a customer interface;

mapping an upstream data stream such that a portion of the upstream data stream is designated for transmission by each of the multiple DSL transceivers; and

using a second data interface coupled to each respective DSL transceiver to communicate mapped portions of the upstream data stream to the next furthest DSL transceiver from the customer interface.

20. (Original) The method of claim 19, wherein the first data interface coupled to each DSL transceiver is configured to communicate portions of the downstream data stream to the second data interface of the next closest DSL transceiver to the customer interface.

21. (Original) The method of claim 19, wherein the second data interface coupled to each DSL transceiver is configured to communicate with the first data interface of the next furthest DSL transceiver from the customer interface.

22. (Original) The method of claim 19, wherein the first and second data interfaces comprise serial data interfaces.

23. (Original) The method of claim 19, wherein the first and second data interfaces comprise bi-directional data interfaces.

24. (Original) The method of claim 19, wherein the first and second data interfaces comprise independent data interfaces.

25. (Original) The method of claim 19, wherein DSL transceiver to DSL transceiver upstream and downstream communications are performed via a data transfer protocol.

26. (Original) The method of claim 25, wherein the data transfer is accomplished with a pulse-code modulation (PCM) protocol.

27. (Original) The method of claim 25, wherein the data transfer protocol is accomplished with an asynchronous transfer mode (ATM) protocol.

28. (Previously Presented) The method of claim 19, further comprising:

identifying mapped portions of the upstream data stream designated for transmission at each of the multiple DSL transceivers; and

transmitting the mapped portion.

29. (Previously Presented) The method of claim 19, further comprising:

reconstructing the received portions of the downstream data stream at each of the multiple DSL transceivers; and

communicating the received and reconstructed downstream data stream to the customer interface.

30. (Canceled)

31. (Currently Amended) A multiple digital subscriber line (DSL) communication system, comprising:

a central office interface configured to receive an upstream data transmission and supply a downstream data transmission; and

a plurality of DSL transceivers in communication with the central office interface via a first data transmission link, the plurality of DSL transceivers in communication with a respective DSL transceiver at a customer premise via respective transmission lines, wherein each of the plurality of DSL transceivers is configured to receive an upstream data stream and to transmit a downstream data stream, the downstream data transmission configured for distribution across the plurality of DSL transceivers, the plurality of DSL transceivers further configured to generate the upstream data transmission from the plurality of upstream data streams, the plurality of DSL transceivers in communication with each other via a plurality of DSL transceiver data transmission links,

wherein each of the plurality of DSL transceivers is in communication with a first data interface and a second data interface, the first data interface interposed between an associated DSL transceiver and a DSL transmission link with a next closest DSL transceiver to the central office interface and configured to receive a downstream data stream from the next closest DSL transceiver to the central office interface, the second data interface interposed between an associated DSL transceiver and a DSL transmission link with a next furthest DSL transceiver to the central office interface and configured to receive an upstream data stream from the next furthest DSL transceiver from the customer interface.

32. (Previously Presented) The multiple DSL communication system of claim 31, wherein the plurality of DSL transceivers is configured to generate the downstream data transmission from the plurality of downstream data streams.

33. (Previously Presented) The multiple DSL communications system of claim 31, wherein the first and second data interfaces associated with each of the plurality of DSL transceivers comprise serial data interfaces.

34. (Previously Presented) The multiple DSL communications system of claim 31, wherein the first and second data interfaces associated with each of the plurality of DSL transceivers comprise bi-directional data interfaces.

35. (Previously Presented) The multiple DSL communications system of claim 31, wherein the first and second data interfaces associated with each of the plurality of DSL transceivers comprise independent data interfaces.

36. (Previously Presented) The multiple DSL communications system of claim 35, wherein the first and second data interfaces between a first DSL transceiver closest to the central office interface and a second DSL transceiver next closest to the central office interface respectively operate at a downstream data rate set by the first DSL transceiver, and wherein additional next closest DSL transceiver pairs from the central office interface operate at a downstream data rate set by the DSL transceiver closest to the central office interface, respectively.

37. (Previously Presented) The multiple DSL communication system of claim 35, wherein the first and second data interfaces between a last DSL transceiver furthest from the central office interface and a next closest DSL transceiver closer to the central office interface operate at an upstream data rate set by the last DSL transceiver and wherein subsequently closer DSL transceiver pairs to the central office interface operate at an upstream data rate set by the DSL transceiver furthest from the central office interface, respectively.

38. (Previously Presented) The multiple DSL communication system of claim 35, wherein upstream and downstream DSL transceiver to DSL transceiver data transmissions are performed via a pulse coded modulation (PCM) data transfer protocol.

39. (Previously Presented) The multiple DSL communication system of claim 35, wherein upstream and downstream DSL transceiver to DSL transceiver data transmissions are performed via an asynchronous transfer mode (ATM) data transfer protocol.

40. (Previously Presented) The multiple DSL communication system of claim 39, further comprising:

an ATM cell synchronization signal operative in parallel and co-directional with each of the plurality of DSL transceiver data transmission links.

41. (Previously Presented) The multiple DSL communication system of claim 40, wherein the ATM cell synchronization signal is configured to identify an ATM cell header.

42. (Currently Amended) A multiple digital subscriber line (DSL) communication system, comprising:

means for communicating with central office equipment to receive a downstream data transmission;

means for distributing a portion of the received downstream data transmission to each of a plurality of DSL communication links for transmission via serially connected DSL transceivers in communication with each other;

means for receiving a portion of an upstream data transmission distributed across each of the plurality of DSL communication links;

means for combining the portions of the upstream data transmission such that the upstream data transmission is via serially connected DSL transceivers in communication with each other;

means for configuring the rate of the upstream and downstream data transmission being driven by the last DSL transceiver that is farthest from a customer interface, with the rate of the upstream and downstream data transmission between two previous DSL transceivers being derived from the rate of the upstream and downstream data transmission of the subsequent DSL transceiver; and

means for communicating the reconstructed upstream data transmission to the central office equipment.

43. (Previously Presented) The multiple DSL communication system of claim 42, wherein the means for receiving a portion of an upstream data transmission is accomplished via a plurality of DSL transceivers dedicated to receive the portion of an upstream data transmission from a predetermined remote DSL transceiver.

44. (Canceled)

45. (Canceled)

46. (Previously Presented) The multiple DSL communication system of claim 42, wherein the plurality of DSL transceivers are in further communication with a first data interface and second data interface interposed in a communication link between serially connected DSL transceivers.

47. (Previously Presented) The multiple DSL communication system of claim 42, wherein the plurality of DSL transceivers are in further communication with a first data interface and second data interface interposed in a communication link between serially connected DSL transceivers.

48. (Previously Presented) A method for transferring data between multiple DSL transceivers at a central office, comprising:

recovering a mapped portion of an upstream data stream at each of the multiple DSL transceivers;

using a first data interface coupled to each respective DSL transceiver to communicate the recovered portion of the upstream data stream to the next closest DSL transceiver to a central office interface;

mapping a downstream data stream such that a portion of the downstream data stream is designated for transmission by each of the multiple DSL transceivers; and

using a second data interface coupled to each respective DSL transceiver to communicate mapped portions of the downstream data stream to the next furthest DSL transceiver from the central office interface.

49. (Original) The method of claim 48, wherein the first data interface coupled to each DSL transceiver is configured to communicate portions of the upstream data stream to the second data interface of the next closest DSL transceiver to the central office interface.

50. (Original) The method of claim 48, wherein the second data interface coupled to each DSL transceiver is configured to communicate with the first data interface of the next furthest DSL transceiver from the central office interface.

51. (Original) The method of claim 48, wherein the first and second data interfaces comprise serial data interfaces.

52. (Original) The method of claim 48, wherein the first and second data interfaces comprise bi-directional data interfaces.

53. (Original) The method of claim 48, wherein the first and second data interfaces comprise independent data interfaces.

54. (Original) The method of claim 48, wherein DSL transceiver to DSL transceiver upstream and downstream communications are performed via a data transfer protocol.

55. (Original) The method of claim 54, wherein the data transfer is accomplished with a pulse-code modulation (PCM) protocol.

56. (Original) The method of claim 54, wherein the data transfer protocol is accomplished with an asynchronous transfer mode (ATM) protocol.

57. (Previously Presented) The method of claim 48, further comprising:

identifying mapped portions of the downstream data stream designated for transmission at each of the multiple DSL transceivers; and

transmitting the mapped portion.

58. (Previously Presented) The method of claim 48, further comprising:

reconstructing the received portions of the upstream data stream at each of the multiple DSL transceivers; and

communicating the received and reconstructed upstream data stream to the central office interface.